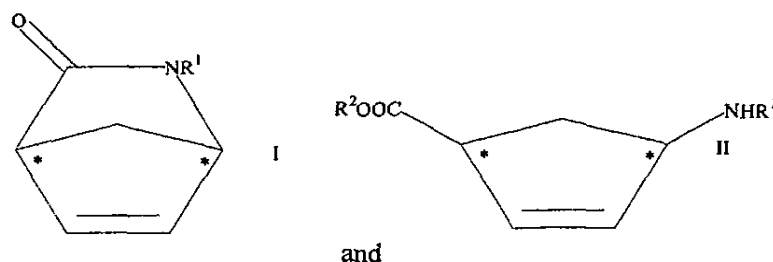
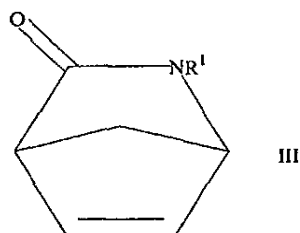


1 ~~17.~~ (New) A method for forming optically active compounds of the formulae



wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl and R^2 is a C_{1-10} alkyl, the method comprising treating a racemic lactam of the formula



with a hydrolase and an effective amount of a nucleophile, wherein said nucleophile is a C_{1-10} alcohol, and a base in a constant pH range to form the optically active compounds of formulae I and II.

2 ~~18.~~ (New) The method according to Claim ~~17~~, wherein a protease or lipase is used as the hydrolase.

3 ~~19.~~ (New) The method according to Claim ~~18~~, wherein a serine protease is used as the protease.

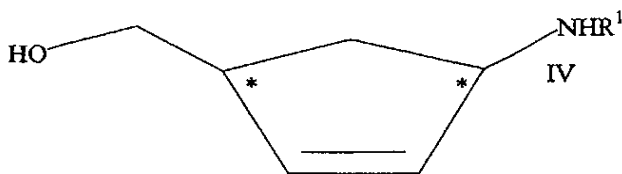
⁴
20. (New) The method according to Claim ³~~19~~, wherein a subtilisin is used as the serine protease.

⁵
21. (New) The method according to Claim ¹~~17~~, wherein 2-acetyl-2-azabicyclo[2.2.1]hept-5-ene-3-one or 2-ethoxycarbonyl-2-azabicyclo[2.2.1]hept-5-ene-3-one is used as the racemic lactam of formula III.

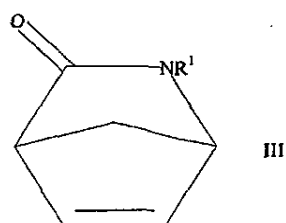
⁶
22. (New) The method according to Claim ¹~~17~~, wherein the treatment of the racemic lactam is conducted in a C₁₋₁₀ alcohol or in a mixture of a C₁₋₁₀ alcohol with an aprotic solvent.

⁷
23. (New) The method according to Claim ¹~~17~~, wherein the treatment of the racemic lactam is conducted at a temperature of 10 to 60 °C.

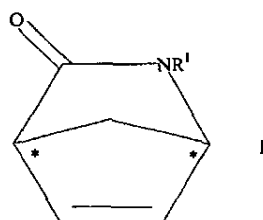
⁹
24. (New) A method for the formation of optically active 1-amino-4-(hydroxymethyl)-2-cyclopentene derivatives of the formula



wherein R¹ is acyl, alkoxycarbonyl or aryloxycarbonyl, the method comprising treating a racemic lactam of the formula

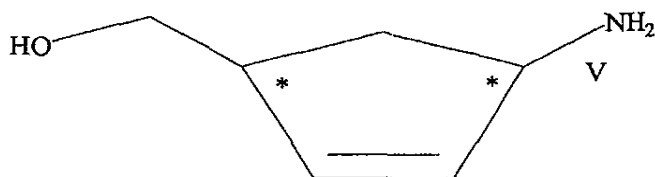


wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl with a hydrolase and an effective amount of a nucleophile, wherein said nucleophile is a C_{1-10} alcohol, and a base in a constant pH range to form the compound of the formula

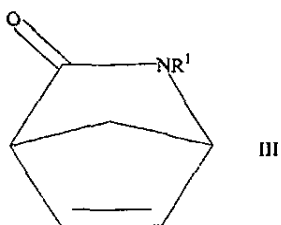


and wherein the compound of formula I is reduced to the compound of formula IV by treatment with a reducing agent.

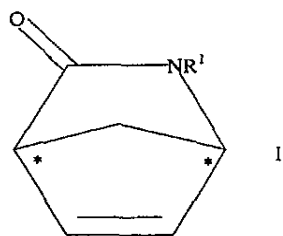
12 25. (New) A method for the formation of (1R, 4S)-1-amino-4-(hydroxymethyl)-2-cyclopentene of the formula



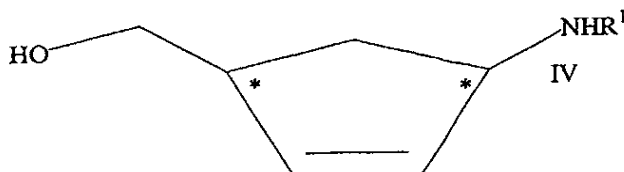
or its salts, the method comprising treating a racemic lactam of the formula



wherein R¹ is acyl, alkoxycarbonyl or aryloxycarbonyl with a hydrolase and an effective amount of a nucleophile and a base in a constant pH range to form the compound of the formula



wherein R¹ is acyl, alkoxycarbonyl or aryloxycarbonyl, wherein the compound of formula I is then reduced to the compound of formula



by treatment with a reducing agent, wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl, and wherein the compound of the formula IV is then hydrolyzed to the compound of formula V.

~~8-26~~ 27. (New) The method of Claim ¹~~17~~, wherein each of the optically active compounds of formulae I and II are isolated after formation.

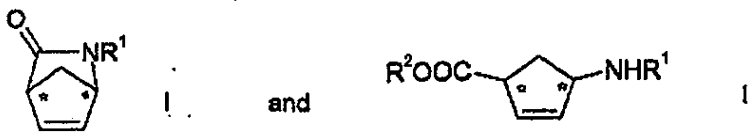
~~12~~ ~~17~~ 28. (New) The method of Claim ⁹~~24~~, wherein each of the optically active 1-amino-4-(hydroxymethyl)-2-cyclopentene derivatives of formula IV are isolated after formation.

~~13~~ ~~18~~ 29. (New) The method of Claim ¹²~~25~~, wherein the (1R, 4S)-1-amino-4-(hydroxymethyl)-2-cyclopentene of formula V is isolated after formation.

~~11~~ ~~27~~ 30. (New) The method of Claim ⁹~~24~~, wherein the reducing agent is a metal hydride.

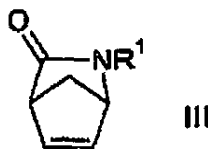
~~14~~ ~~30~~ 31. (New) The method of Claim ¹²~~25~~, wherein the reducing agent is a metal hydride.

~~15~~ ~~31~~ 32. (New) A method for forming optically active compounds of the formulae



wherein R^1 is C_{1-4} alkanoyl which is substituted with one or more halogen atoms, benzylcarbonyl, phenylcarbonyl, methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl,

butoxycarbonyl or phenyloxycarbonyl and R^2 is a hydrogen atom, the method comprising treating a racemic lactam of the formula



with a hydrolase and an effective amount of water as nucleophile and a base in a constant pH range to form the optically active compounds of the formulae I and II.

^{1.6} ~~35~~ ³⁴ 33. (New) The method according to Claim ~~32~~ ¹⁵ 32, wherein a protease or lipase is used as the hydrolase.

^{1.7} ~~34~~ ³³ 34. (New) The method according to Claim ~~33~~ ¹⁶ 33, wherein a serine protease is used as the protease.

^{1.8} ~~34~~ ³³ 35. (New) The method according to Claim ~~34~~ ¹⁷ 34, wherein a subtilisin is used as the serine protease.

^{1.9} ~~35~~ ³⁴ 36. (New) The method according to Claim ~~32~~ ¹⁵ 32, wherein 2-ethoxycarbonyl-2-azabicyclo[2.2.1]hept-5-ene-3-one is used as the racemic lactam of formula III.

^{2.0} ~~36~~ ³⁵ 37. (New) The method according to Claim ~~32~~ ¹⁵ 32, wherein treatment of the racemic lactam is conducted in water, a buffer solution or in a mixture of these with an aprotic solvent.